

**What is claimed is:**

1. A method for obtaining a liquid sample having a decreased cellular or particulate concentration for optical examination comprising:

a) providing an apparatus comprising:

5 a sample chamber comprising

two containment walls, at least one of them being transparent for optical examination;

at least one wall for holding said containment walls at a distance, and enclosing an interior space;

10 a separation wall comprising at least a first separation channel and a second separation channel, wherein the interior space of said sample chamber is divided into a first compartment and a second compartment by said separation wall;

a sample entrance into the first compartment; and

15 a means for venting the sample chamber during filling;

b) depositing a liquid sample into the sample entrance of said sample chamber;

c) allowing the sample to flow from the sample entrance into the first compartment;

20 d) allowing the sample to advance to the separation wall and the separation channels therein;

e) allowing the sample to advance through the separation wall and the first and second separation channels;

f) allowing the sample to continue to advance until it reaches and stops at  
25 the end of the sample chamber; and

g) obtaining a liquid sample having decreased cellular or particulate concentration.

2. The method according to Claim 1 wherein said liquid sample is blood.

3. The method according to Claim 1 wherein said apparatus further  
5 comprises a moat surrounding the sample chamber.

4. The method according to Claim 3 wherein said moat further comprises  
at least one capillary stop to prevent uncontrolled flow.

10 5. The method according to Claim 3 wherein said liquid sample is blood.

6. The method according to Claim 1 wherein said first separation channel  
is about 3 to 10  $\mu\text{m}$  deep by 5 to 50  $\mu\text{m}$  wide.

15 7. The method according to Claim 1 wherein said second separation  
channel is about 0.5 to 1.5  $\mu\text{m}$  deep by 50 to 1000  $\mu\text{m}$  wide.

8. The method according to Claim 3 wherein said first separation channel  
is about 3 to 10  $\mu\text{m}$  deep by 5 to 50  $\mu\text{m}$  wide.

20 9. The method according to Claim 3 wherein said second separation  
channel is about 0.5 to 1.5  $\mu\text{m}$  deep by 50 to 1000  $\mu\text{m}$  wide.

10. The method according to Claim 1 wherein said apparatus further  
25 comprises a plurality of notches in the interior space of the sample chamber.



19. The method of Claim 1 wherein said second compartment has a thickness of from about 1 to 7  $\mu\text{m}$ .

Sub  
A2  
20. The method of Claim 1 wherein said first compartment has a thickness  
5 of from about 10 to 50  $\mu\text{m}$ .

21. The method of Claim 3 wherein said second compartment has an internal volume which is smaller than the internal volume of said first compartment.

Sub  
A3  
10 22. The method of Claim 3 wherein said second compartment has a thickness of from about 1 to 7  $\mu\text{m}$ .

23. The method of Claim 3 wherein said first compartment has a thickness  
of from about 10 to 50  $\mu\text{m}$ .

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